TITLE: MODEM WITH ENHANCED ECHO CANCELER

ABSTRACT OF THE DISCLOSURE

A modem incorporating apparatus and methods to achieve computationally efficient echo cancellation. The apparatus include a cyclic echo synthesizer sub-canceler in the time domain and a echo canceler in the frequency domain. The method includes generating a cyclic echo synthesizer signal using a sub-canceler structure, adding the cyclic echo synthesizer signal to a receive signal in the time domain, generating an echo cancellation signal, and subtracting the echo cancellation signal from the receive signal in the frequency domain. The apparatus and methods may be used for echo cancellation in an asynchronous digital subscriber line (ADSL) modem using discrete multi-tone (DMT) technology.

M:\SWeed\Agere\25,064\Work\application